Volunteer Lake Assessment Program Individual Lake Reports

ROUND POND, LYMAN, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	2,024	**Max. Depth (m):**	4.6	**Flushing Rate (yr^{-1}):**	46.1
Surface Area (Ac.):	19	**Mean Depth (m):**	1.1	**P Retention Coef:**	0.36
Shore Length (m):	1,350	**Volume (m^3):**	81,000	**Elevation (ft):**	830

TROPHIC CLASSIFICATION

Year	Trophic class
1999	MESOTROPHIC

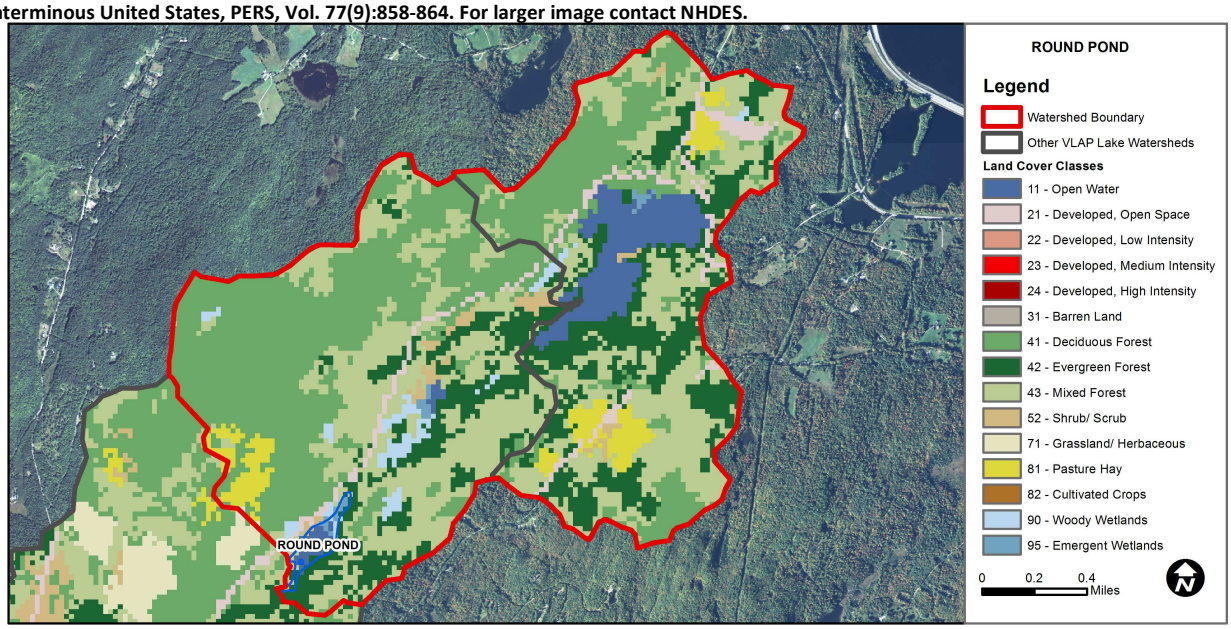
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Slightly Bad	>/=5 samples and median is >threshold.
	pH	Very Good	At least 10 samples with 0 exceedances of criteria.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	Chlorophyll-a	Slightly Bad	>5 samples and median is > threshold.
Primary Contact Recreation	E. coli	No Data	No Data for this parameter.
	Chlorophyll-a	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	5.39	Barren Land	0	Grassland/Herbaceous	0.02
Developed-Open Space	2.99	Deciduous Forest	33.79	Pasture Hay	3.75
Developed-Low Intensity	0	Evergreen Forest	17.92	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	32.47	Woody Wetlands	1.62
Developed-High Intensity	0	Shrub-Scrub	1.21	Emergent Wetlands	0.4

VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS
ROUND POND, LYMAN, NH
2013 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (*Refer to Table 1 and Historical Deep Spot Data Graphics)*

- **CHLOROPHYLL-A:** Chlorophyll levels were very low in July, much less than the state median, and the lowest measured since monitoring began. Visual inspection of historical data indicates variable chlorophyll levels.
- **CONDUCTIVITY/CHLORIDE:** Deep spot and tributary conductivity levels were elevated and greater than the state median. Visual inspection of historical data indicates relatively stable epilimnetic conductivity since monitoring began.
- **TOTAL PHOSPHORUS:** Deep spot phosphorus levels were average for most lakes and slightly less than the state median. Visual analysis of historical data indicates relatively stable epilimnetic phosphorus since monitoring began. Inlet and Outlet phosphorus levels were relatively low.
- **TRANSPARENCY:** Transparency was good and viewscope transparency was slightly better than non-viewscope transparency and likely a better representation of actual conditions. Visual inspection of historical data indicates stable transparency since monitoring began.
- **TURBIDITY:** Epilimnetic, Inlet and Outlet turbidities were relatively low. Hypolimnetic and Gravel Pit turbidities were slightly elevated.
- **PH:** Deep spot and tributary pH levels were sufficient to support aquatic life. Visual inspection of historical data indicates variable epilimnetic pH since monitoring began.
- **RECOMMENDED ACTIONS:** Continue monitoring the Gravel Pit station to establish a baseline data set. Conductivity levels are elevated and it is recommended that local road agents obtain a voluntary NH Road Salt Applicator license through the UNH Technology Transfer (T2) Center's Green SnowPro Training. Keep up the great work!

Table 1. 2013 Average Water Quality Data for ROUND POND

Station Name	Alk.	Chlor-a	Cond.	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	ug/l	m		ntu	
					NVS	VS		
Epilimnion	30.1	0.71	91.3	10	2.58	2.95	0.83	7.40
Hypolimnion			73.9	11			2.85	6.79
Gravel Pit			95.0				2.03	7.70
Inlet			90.8	8			1.17	7.30
Outlet			83.8	9			0.84	7.49

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m^3
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
pH	N/A	Ten consecutive years of data necessary.	Chlorophyll-a	N/A	Ten consecutive years of data necessary.
Conductivity	N/A	Ten consecutive years of data necessary.	Transparency	N/A	Ten consecutive years of data necessary.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary.